FEL'DBEYN, B.

Lowering the cost of the procurement system. Mias.ind.SSSR
30 no.2:22 '59.   (MIRA 13:4)

1. Krymskiy myasotrest.
             (Crimea--Meat industry)

FELDBLUM, Z. ; MINC, S.,

The Study on Cathodic Protection Against Corrosion with Stray Currents, Part III by S. MINC and Z. FELDBLUM, Page 440, Przemysl Chemiczny, No. 8, 1957.

POLAND / Chemical Technology. Corrosion & Its   H
          Prevention.

Abs Jour: Ref Zhur-Khimiya, No 12, 1958, 40006.

Author : Mints, Feldblyum. Z.
Inst   : Not given.
Title   : Investigation of the Cathode Protection from the
          Action of Wandering Currents. I. The Cathode Pro-
          tection from Harmful Action of Wandering and
          Protecting Currents.

Orig Pub: Przem. Chem., 1957, 13, No 6, 330-332.

Abstract: According to the method suggested by the authors,
          the identity of the interaction between a protect-
          ing current of a cathode protection and a wander-
          ing current on a pipe system was established (in
          the case of the same direction of flow, as well as
          in the case of their reverse direction). An

Card 1/2   8

POLAND / Chemical Technology. Corrosion & Its
Prevention   H

Abs Jour: Ref Zhur-Khimiya, No 12, 1958, 40006.

Abstract: equation is given which determines the magnitude
of the protection current of a cathode protection,
depending on the magnitude of a wandering current
and the distance from the initial point on the pipe
system. The obtained results verify those pre-
viously established by the authors, i.e., the com-
mon nature of the relation between a minimum
current strength of a cathode protection from
corrosion caused by wandering currents, and their
magnitude. The latter is measured at any point
on the pipe system, whenever the source of the
wandering current has a final load.

Card 2/2

POLAND / Chemical Technology. Chemical Products and   H-4
      Their Application. Corrosion. Corrosion
      Control.

Abs Jour: Ref Zhur-Khimiya, No 1, 1959, 1663.

Author : Minc, S., Feldblum, Z.
Inst   : Not given.
Title   : An Investigation on the Protection of a Cathode
      from Wandering Currents. II. The Voltage Drop
      in a Wandering Current at a Non-Concentrated Cur-
      rent Load.

Orig Pub: Przem. chem., 1957, 13, No 7, 382-383.

Abstract: A method described for laboratory experiments on
      investigating the effectiveness of cathode pro-
      tection in underground pipe lines. It is pointed
      out that the tests were conducted at the current
      intensity of 50-100 milliamperes, resistance of

Card 1/3

POLAND / Chemical Technology. Chemical Products and   H-4
Their Application. Corrosion. Corrosion Con-
trol.

Abs Jour: Ref Zhur-Khimiya, No 1, 1959, 1663.

Abstract: $1/7 \times 10^5 - 3 \times 10^6$ ohm. centimeter and soil
moisture of 3-6%. On the basis of the voltage
decomposition measured on a bar, of wandering
current in a pipe and of the current flowing
through a bar, six diagrams are submitted for
calculating and determining the nature of cath-
ode protection in the case of a non-concentrated
current load.

III. The investigations of a protective current
distribution were conducted on a model represent-
ing an underground pipe line at a current density
of 4-20 milliamperes, specific soil resistance of
1.2×10^5 ohm. centimeter and 4-6% moisture. The

Card 1/2

11

FEL'DBLYUM, BORIS, BORISOVICH

PHASE I BOOK EXPLOITATION   341

Yefimov, Aleksey Nikolayevich, Parkhuta, Andrey Nikitovich, Tilevich, Izrail'
Aleksandrovich, Tuler, Lazar' Srulevich, Fel'dblyum, Boris Borisovich,
and Shaposhnikov, Kas'yan Grigor'yevich

Osnovy teorii poleta samoleta (Principles of the Theory of Aircraft Flight)
Moscow, Voyen. izd-vo Min-va obor. SSSR, 1957. 443 p. No. of copies
printed not given.

Ed.: Zakharov, D. M., Engineer-Col.; Tech. Ed.: Myasnikova, T. F.

PURPOSE: This book is intended as an aviation and technical text book on the
secondary school level. It may also be used as a textbook in the study
of the fundamentals of aircraft flight theory for the flying and tech-
nical personnel of the Air Forces and of the All-Union Voluntary
Society for the Promotion of the Army, Aviation and Navy. The intro-
duction is intended for readers who embark for the first time upon the
study of the fundamentals of aviation. The text is approved as a text-
book for military aviation and technical schools by the Chief of the Vuz
Administration of the Military Air Force.

Card 1/17

Principles of the Theory (Cont.)   341

COVERAGE: The authors discuss the fundamentals of applied general and high-speed
           aerodynamics, the fundamentals of the aerodynamics of propellers, air-
           craft performance, stability, control, maneuvering flight.   The book
           contains 4 tables and 360 figures. There are 29 Soviet references, 4 of
           which are translations.

TABLE OF
CONTENTS:

Card 2/17

FEL'DBLYUM, B.I., inzhener; SHARONOV, M.S., inzhener.

Safety measures in operating traveling jib cranes.   Bezop.truda
v prom. 1 no.5:21-22 '57.   (MIRA 10:7)
                        (Cranes, derricks, etc.)

KONDRAT'YEV, N.V.,inzh.; FEL'DBLYUM, B.I., inzh.

Effective measures for preventing crane accidents. Bezop.truda v prom. 1 no.10:27-28 O '57. (MIRA 10:11)

1. Balashinskiy zavod No. 24 (for Kondrat'yev). 2. Upravleniye TSentral'nogo okruga Gosgortekhnadzora SSSR.
(Cranes, derricks, etc.) (Machinery--Safety appliances)

SMIRNOV, A.I., inzh.; FEL'DBLYUM, B.I., inzh.

Over-all inspection of crane equipment. Bezop.truda v prom. 2
no.10:14-15 O '58.   (MIRA 11:11)

1. Upravleniye TSentral'nogo okruga Gosgortekhnadzora RSFSR.
      (Cranes, derricks, etc.--Safety measures)

FEL'DBLYUM, I.S.

Superfluous information in primary documents. NTI no.11:6-7 '64.

(MIRA 18:1)

MIROSHNICHENKO, F.D.; FEL'DBLYUM, I.S.; PROKOPCHENKO, Ye.A.

Improving transformer steel properties. Stal' 25 no.5:458 My '65.
(MIRA 18:6)

VIL'DELYUM, P.L.

Head for planing machines using idling for cutting. Trudy MINKHIGP
no.29:115-118 '60.   (MIRA 13:12)
            (Planing machines--Attachments)

PHASE I BOOK EXPLOITATION

SOV/3927

Yaroslavl'. Tekhnologicheskiy institut

Uchenyye Zapiski, Tom 17 (Scientific Notes, Vol. 2)
Yaroslavl'. Poligrafizdat, 1957 [cover notes print....]

Editorial Staff: A.I.Zakhin, Candidate of Historical Sciences; Docent
M.M. Makarov, Candidate of Technical Sciences; Professor M.I. Farberov,
Doctor of Technical Sciences;

Resp. Ed.: Professor M.I. Farberov, Doctor of Chemical Sciences

Secretary-Scientist: N.V. Ostroukhikov, Candidate of Chemical Sciences

PURPOSE: This book is primarily intended for industrial chemists and tech-
nologists interested in the kinetics of chemical reactions and their re-
lated physical processes.

COVERAGE: The twenty-two articles of this collection deal mainly with in-
dustrial processes for the preparation of organic compounds, problems of
heat physics and general mechanics related to these processes, and with
industrial chemical equipment. No personalities are mentioned. References
are given after each article.

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Stability of Crystallites on the Strength of Rubbers with KK (Natural Rubber)
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S/204/63/003/001/003/013
E075/E436

AUTHORS: Fel'dblyum, V.Sh., Komissarova, G.P., Myasnikova, L.D.,
Kryukov, S.I., Farberov, M.I.

TITLE: The synthesis of isoprene from propylene. 1. Analysis
of aluminium alkyls in the process of dimerization of
propylene

PERIODICAL: Neftekhimiya, v.3, no.1, 1963, 13-19

TEXT: The aim of the work was to investigate the methods for the
analysis of activity and composition of aluminium alkyls.   The
analysis consists of determining the ratio of the "active"
aluminium in AlR_3, where   R - an organic radical, to total Al.
The methods used to determine the "active" Al were: 1) the indicator
method of Razuvayev and Grayevskiy,   2) the Ziegler ammoniacal
method,   3) the Tepenitsyna-Farberova oxidation-reduction method,
4) decomposition of AlR_3 with H_2O with the subsequent measurement
of the evolved gas volume.   The first two methods gave correct
values of the activity but are tedious in operation.   The authors
improved the Ziegler method by using di- or trimethylamine in place
of NH_3, which greatly decreased the analysis time.   Examination of

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The synthesis of isoprene ...   S/204/63/003/001/003/013
                                       E075/E436

AlR₃ used several times for the catalysis of the dimerization of propylene showed that the first portion of the higher hydrocarbons (byproducts) forming during the reaction attach themselves to Al, or displace a part of the lower alkyl groups in AlR₃. Thus AlR₃ used several times as catalyst is a complex mixture of aluminium alkyls, the molecules of which contain propyl and isobutyl groups and at least one $C_9 - C_{12}$ group. There are 2 figures and 2 tables.

ASSOCIATION: Nauchno-issledovatel'skiy institut monomerov dlya SK
             Yaroslavskiy tekhnologicheskiy institut
             (Scientific Research Institute of Monomers for
             Synthetic Rubber, Yaroslav₁ Technological Institute)

SUBMITTED: June 9, 1962

Card 2/2

S/204/63/003/001/004/013
E075/E436

AUTHORS: Fel'dblyum, V.Sh., Kryukov, S.I., Farberov, M.I.,
Golovko, A.V., Tyuryayev, I.Ya., Pankov, A.G.

TITLE: The synthesis of isoprene from propylene
2. Isomerization of 2-methylpentene-1 in the liquid
phase in the presence of solid acidic catalysts

PERIODICAL: Neftekhimiya, v.3, no.1, 1963, 20-27

TEXT: The object of the work was to isomerize 91.4% wt. pure
2-methylpentene-1 in the liquid phase using silica-alumina,
cation exchange resin КУ-1 (KU-1), phosphoric acid-kieselguhr,
alumina and silica gel as catalysts. All experiments were carried
out at 100 and 150°C and at 75 to 125°C with KU-1 as catalyst.
The isomerization is complicated by three secondary reactions, the
main of which is the formation of dodecene (dimerization of
isohexenes). A small amount of cracking gives amylenes
(especially at the higher temperatures). There is also formation
of small amounts of various isohexenes. Silica gel and alumina
were the least active catalysts. With the remaining more active
catalysts the velocity of the main and secondary reactions was much
Card 1/3

The synthesis of ...

S/204/63/003/001/004/013
E075/E436

higher, the increased temperatures favoring the formation of dodecene and decreasing the yield of 2-methylpentene-2. Isomerization of 2-methylpentene-1 (A) to 2-methylpentene-2 (B) with the formation of dodecenes (A_2, AB and B_2) proceeds as follows

$$A \underset{}{\overset{K}{\rightleftharpoons}} B, \qquad 2A \xrightarrow{K_1} A_2, \qquad A + B \xrightarrow{K_2} AB, \qquad 2B \xrightarrow{K_3} B_2.$$
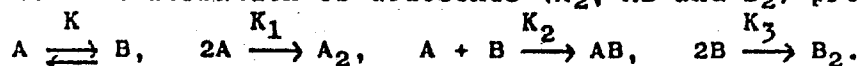
The relative values of K and K_1, K_2, K_3 depend on the proton acidity of the catalysts. Thus their effectiveness may be obtained from all these values. The catalysts were rated in the order of increasing activity:

$$Al_2O_3 \approx SiO_2 < \text{silica-alumina} < H_3PO_4 - \text{kieselguhr} \approx KU-1.$$

The effectiveness of acidic sites increases in the order KU-1 < H_3PO_4 - kieselguhr < silica-alumina. Catalysts KU-1 and silica-alumina give about 80% conversion to 2-methylpentene-2 at 75 and 100°C respectively. There are 2 figures and 4 tables.

Card 2/3

The synthesis of ...

S/204/63/003/001/004/013
E075/E436

ASSOCIATION: Nauchno-issledovatel'skiy institut monomerov dlya
sinteticheskogo kauchuka Yaroslavskiy tekhnologicheskiy
institut (Scientific Research Institute of Monomers
for Synthetic Rubber, Yaroslav Technological
Institute)

SUBMITTED: June 9, 1962

Card 3/3

FEL'DBLYUM, V. Sh.; MYASNIKOVA, L.D.; KRYUKOV, S.I.; FARBEROV, M.I.

Synthesis of isoprene from propylene. Neftekhimiia 4 no.2:
257-261 Mr-Ap'64
(MIRA 17:8)

1. Nauchno-issledovatel'skiy institut monomerov dlya sinteti-
cheskogo kauchuka, Yaroslavl' i Yaroslavskiy tekhnologicheskiy
institut.

FEL'DBLYUM, V.Sh.; KRYUKOV, S.I.; FARBEROV, M.I.

Kinetics and the mechanism of acid-induced catalytic conversions
of 2-methyl-1-pentene. Kin. i kat. 5 no.3:454-459 My-Je '64.
(MIRA 17:11)
1. Nauchno-issledovatel'skiy institut monomerov dlya sinteticheskogo
kauchuka i Yaroslavskiy tekhnologicheskiy institut.

SOBOLEV, V.M.; PROKOF'YEV, Ya.N.; FEL'DBLYUM, V.Sh.; ZAKHAROV, B.N.
[deceased]; MKHEIDZE, M.A.

Low-temperature viscosimetric tests in the development of
the technology for the synthesis of butyl rubber. Kauch.
i rez. 23 no.6:1-4 Je '64.   (MIRA 17:9)

1. Nauchno-issledovatel'skiy institut monomerov dlya
sinteticheskogo kauchuka.

FOL'DBRIN, N. G.

Fuel Abst.
Vol. 15 No. 4
Apr. 1954
Natural Solid Fuels
Preparation

④

2779. CONSERVATION OF COKING COALS IN STORE AT COKE AND CHEMICAL WORKS.
Bogoyavlenskii, , Fol'dbrin, N.G., Krol, V.L. and Khersonskaya, E.A. (Za Ekon.
Topliva (Fuel Econ.), June 1952, 13-18; abstr. in J. Usin. Gaz, Jan. 1953, vol. 77,
27; and in Gas World, 28 Nov. 1953, vol. 138, 1394). Experiments on the effects of
storage in the open air on the carbonising properties of coal have been reported.
Measurements of the temperature in the heaps showed that if the heap was 33 ft. high,
the maximum occurred about 16 ft. from the ground, whereas if the heap was 16 ft.
high, the maximum occurred close to the ground. As a result of the experiments, the
maximum stocking period was found to be between one and two months. The oxidation of
the coal was found to be less rapid if the stock was piled during cold weather. (I.).
                                                                          H.D.

FEL DBFIH, M. G.

FU
3711. METHOD OF DETERMINATION OF DEGREE OF OXIDATION OF COKING COALS.
Bogoyavlenskii, V.V. and Fel'dhein, H.G. (Zavod. Lab. (Factory Lab., Moscow),
1954, vol. 20, (3), 319, 320) abstr. in Ref. Zh. Khin. (Ref. J. Chem.,
Moscow), 1955, (16), 35554). This laboratory method is based on the decrease
in wettability of the surface of the coal by dissociation products with
increase in surface oxidation. Wettability is determined by the resistance
to a stream of nitrogen in coking coal during a continuous rise in
temperature. A 100 g sample with particle size below 1.5 mm is placed in the
plastometric container of a Sapozhnikov apparatus. A tube of 4 mm diameter,
with its tip reduced to 1.5 mm, is placed in the coal 7 mm from the bottom,
and nitrogen is fed to it at a constant rate of 125 ml/min. The container
is heated up at 2°C/min. Very small changes in the initial stage of
oxidation are recorded.

①

AUTHOR: Lazovskiy, I.M., Fel'dbrin, M.G. and Gryaznov, N.S. (Vukhin).

TITLE: Coking of blends prepared by differential grinding.
            (Koksovanie ugol'nykh shikht, podgotovlennykh metodom
            izbiratel'nogo drobleniya.)

PERIODICAL: "Koks i Khimiya" (Coke and Chemistry),
            1957, No. 4, pp. 8 - 12, (U.S.S.R.)

ABSTRACT: Seven different schemes of grinding coal for coking were
            investigated. The first four schemes (Fig. 1) were simple
            schemes related to normal grinding (93 ± 1% of below 3 mm):
            scheme 1 - standard; 2 consists of separating the size 3 mm;
            3 - separation of the size 3 mm and its regrinding and return
            to the blend; and 4 - separation from coal - 3 mm size and
            standard grinding of larger sizes and their subsequent remixing.
            Three remaining schemes (Fig. 2) differ in that intermediate
            sizes (4-2 mm or 6-3 mm) are separated and then finely ground.
            Moreover, scheme 7 differed from others in that only diluting
            coals were differentially ground while the remaining part of
            the blend is ground in the usual manner. Coking of the experi-
            mental blends of three different compositions (Table 1) was
            carried out in a pilot plant (VUKhIN). Results of the coking
            experiments are given in Table 2. The best results were
            obtained using 5 and 6 schemes, the strength of the coke
            increased and the proportion of 80-60 mm size in the metallur-
            gical coke increased by 3-7%. Blends made from petrographically

AUTHORS: Fel'dbrin, M.G., Gryaznov, N.S. and Lazovskiy, I.M.   68-58-3-1/22

TITLE: Utilisation of Gas and Weakly-caking Coals in Blends of the Eastern Works (Ispol'zovaniye gazovykh i slabo-spekayushchikhsya ugley v shikhtakh vostochnykh zavodov)

PERIODICAL: Koks i Khimiya, 1958, Nr 3, pp 3 - 5 (USSR).

ABSTRACT: The possibility of increasing the proportion of gas and weakly-caking coals in blends used on the Eastern Coke Oven Works and the choice of correct blends which are able to accommodate 40-60% of the above coals were investigated. Blends containing gas coals were prepared by a preferential grinding on a pilot plant, VUKhIN. The composition of experimental blends is given in Tables 1 and 3, from which it can be seen that gas coals were replacing fat and well-caking coals. The method of preferential grinding is des-cribed in some detail. Coking was done on a semi-industrial plant; the results obtained are given in Tables 2 and 4. Conclusions: preferential grinding of blends containing 40-60% of gas coals considerably improves the strength of coke (by 12-28 kg) providing that the blends possess sufficient caking ability (y > 15 mm).. However, despite a considerable increase in coke strength by preferential grinding, the latter cannot secure the production of coke similar in strength to

Card1/2

Utilisation of Gas and Weakly-caking Coals in Blends of the Eastern
Works

68-58-3-1/22

that of current production. Further increase in the coke
strength can be obtained by applying preferential grinding
and stamp charging. The results obtained should be confirmed
by trials under industrial conditions. There are 4 tables.

ASSOCIATION: VUKhIN

Card 2/2

SOV/24-58-6-31/35

AUTHORS: Gryaznov N.S., Lazovskiy I.M. and Fel'dbrin M.G.
(Sverdlovsk)

TITLE: Contribution to the Theory of Coke Formation in Connection
with the Selective Grinding of Coals (K teorii formir-
ovaniya koksa v svyaze s izbiratel'nym izmel'cheniyem
ugley)

ABSTRACT: Laboratory and semi-production coking test results with
selective grinding of coal have shown that at Eastern
coke plants more gas and weakly caking coals can be used
and coke quality with normal coals improved. The authors
deal first with the structural (crack-free) strength of
coke, tabulating (Table 1) results which show that it is
reduced by selective grinding. Other results (Table 2)
indicate that the viscosity of the coal mix on softening
rises, the effect being obtained (Table 3) when petro-
graphically homogeneous coals are ground. The authors
discuss the increase in internal friction of the plastic
mass which occurs with all coals as the coal-grain
surfaces are opened up. The decrease in charge bulk

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SOV/24- 58-6-31/35

Contribution to the Theory of Coke Formation in Connection with the Selective Grinding of Coals

density produced by selective grinding leads to higher porosity and this, together with the poorer caking, accounts for the deleterious effect of such grinding on structural strength. The authors consider next the lump strength of coke, showing (Table 1) that this increases with selective grinding. They attribute this to the greater petrographic and size uniformity and consequent reduction of internal stresses. Finally the authors summarize the effects of selective grinding for various types of charge: coke stability is improved when a low-stability coke is otherwise obtained from strongly caking coals; with charges containing a high proportion of gas coals a strong coke is not obtained; a relatively small improvement in coke strength is obtained with charges

Card 2/3   which normally give a medium-shatter, structurally strong

Contribution to the Theory of Coke Formation in Connection with the Selective Grinding of Coals

SOV/24-58-6-31/35

coke; strong coke is not obtained with low-caking charges normally giving a highly abrading coke. For preventing reduction of structural strength due to selective grinding the authors recommend tamping of the charge and quote some test results.

There are 5 tables and 6 references (5 Soviet, 1 French)

SUBMITTED: July 16, 1957

Card 3/3

AUTHORS   Lazovskiy, I.M., Bogoyavlenskiy, V.V., and Fel'dbrin, M.G.

SOV/68-58-9-2/21

TITLE: Averaging Coals and the Choice of the Type of Coal Stock-
            yard for Modern Coking Works (Usredneniye ugley i vybor
            tipa ugol'nogo sklada dlya sovremennogo koksokhimicheskogo
            zavoda)

PERIODICAL: Koks i Khimiya, 1958, Nr 9, pp 6-9 (USSR)

ABSTRACT: During the All-Union Conference of the Workers of the
            Coking industry the following permissible deviations (from
            mean) for coke quality were established: drum tests $\pm$ 4kg,
            sulphur $\pm$ 0.05, ash $\pm$ 0.3%.   These limits of variation
            impose the following limits for variation in the proximate
            analysis of coal blends: ash $\pm$ 0.3%, sulphur $\pm$ 0.05%,
            volatile matter $\pm$ 0.7%.   To obtain the above degree of
            stability in the properties of coal blends, averaging of
            coals on stockyards and blending plants is necessary.
            Using methods of statistical analysis the authors discuss
            the necessary blending facilities for various examples of
            coking works supplied with a different number of coal
            types with a given variability in properties of coal from
            the individual deliveries.   It is concluded that for

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SOV/68-58-9-2/21

Averaging Coals and the Choice of the Type of Coal Stockyard for
Modern Coking Works

works supplied from nearby coal mines with a uniform in
quality coal (ash $\pm$ 0.6, volatiles $\pm$ 2.0) the construction
of bunker installations serving simultaneously for
averaging and blending coals is recommended. For works
situated far from the supplying base and obtaining coals
from a large number of mines the construction of a stock
yard for averaging coals as distinct from the blending
plant is considered necessary.
There is 1 table, and 4 references (3 Soviet and 1
English)

ASSOCIATION: VUKhIN

Card 2/2

SOV/68-58-2-5,'20

AUTHORS: Gryaznov, N.S., Fel'dbrin, M.G. and Kuzovkov, S.S.

TITLE: Coking of Preliminary Pre-heated Coal Blend (Koksovaniye predvaritel'no nagretoy ugol'noy shikhty)

PERIODICAL: Koks i Khimiya, 1959, Nr 2, pp 17 - 20 (USSR)

ABSTRACT: The influence of a preliminary pre-heating of the coal charge on the characteristic features of the coking process and the quality of coke produced was investigated. A blend from Kuznets coals, used on the Chelyabinsk Metallurgical Works, in which a part of the fat coal replaced by gas coal of the following composition was used for the investigation, %: KZh - 41, Zhl - 17, Gl - 11, K2 - 31. The blend was crushed in the usual manner to 93% of - 3 mm fraction. Pre-heating was done in a rotating drum placed in a ring furnace. The coking was done in an electrically heated oven, 400 mm wide of a capacity of 180 kg. The temperature of the surface of oven walls at the end of coking was 1 030 $^\circ$C and at the tar line plane 950 $^\circ$C. The hot blend was charged directly from the pre-heating drum. Changes in the bulk density and rate of flow (from a special bunker with an outlet 40 mm in diameter) of pre-heated blend were determined (Table 1) - both attained maximum value at a pre-heating temperature

Card1/3

Coking of Preliminary Re-heated Coal Blend   SOV/68-58-2-5/20

of 200 °C. Pre-heating of the blend to a temperature
above 200 °C is unprofitable as the bulk density and the
rate of flow decrease due to the beginning of thermal
decomposition. Changes in the volatile content, thickness
of the plastic layer and apparent viscosity with pre-
heating temperature are given in Table 2 and Figure 1. A
decrease in the fluidity of the plastic mass begins after
pre-heating to 204 °C. The temperature gradient during
coking was measured with 4 thermocouples placed in one
half of the oven. With increasing pre-heating temperature
the mean coking velocity increases but the individual
layers of the charge carbonise at a rate sharply different
from the mean rate. Changes in the heating rate of
ordinary and pre-heated charges during the plasticity
period at various distances from the wall are given in
Table 3 and changes in the thickness of the plastic layer
during its movement towards the tar line plane in
Figure 2. The quality of the coke produced from ordinary
blend and pre-heated to various temperatures is compared
in Table 4. On pre-heating of charge up to 200 °C, the
Card2/3 quality of the coke improves, but with pre-heating to a

Coking of Preliminary Pre-heated Coal Blend   SOV/68-58-2-5/20

higher temperature the quality of the coke deteriorates. It is concluded that pre-heating of the coal charge improves the quality of metallurgical coke and increases the throughput of the coke ovens by approximately 35%. Pre-heating of the coal charge within a range up to 200 $^{\circ}$C is advantageous. There are 2 figures, 4 tables and 7 Soviet references.

ASSOCIATION: VUKhIN

Card 3/3

SOV/68-59-6-2/25

AUTHORS: Lazovskiy, I.M., Gryaznov, N.S., Fel'dbrin, M.G.
(VUKhIN), Pakhalok, I.F., Poputnikov, F.A., Yurenkov,N.I.
and Lyamin, I.N. (VNIIUglebogashcheniye)

TITLE: Preparation of Coal Blend by Air Ellutriation with
Crushing of Large and Heavy Particles (Podgotovka
ugol'nykh shikht vozdushnoy separatsiyey s drobleniyem
krupnykh i tyazhelykh chastits)

PERIODICAL: Koks i Khimiya, 1959, Nr 6, pp 5-8 (USSR)

ABSTRACT: The use of air ellutriation in the preparation of coal
blends by preferential crushing is proposed. The method
consists in that a coal or a coal blend of a size 25-0 mm
is air ellutriated in a pipe, so that 3-0 mm size
fraction is removed by the air stream and the 25-3 mm
fraction is crushed and again air ellutriated. A pilot
plant installation erected for this purpose (fig) and
some experimental results obtained are described. Coal
blends used on one of the Eastern coking works were used
for experiments. Size distributions of coal blends and
quality of coke obtained by the usual crushing and
preferential crushing with and without air ellutriation
are shown in Tables 1 and 2. It was found that the use
of air ellutriation decreases the proportion of dust

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SOV/68-59-6-2/25

Preparation of Coal Blend by Air Ellutriation with Crushing of Large and Heavy Particles

(0.42 - 0 mm) by 5.8% and the distribution of ash between the individual size fraction is more uniform (ash content of larger particles is somewhat lower than that of fine fractions) and the coke obtained (on a pilot plant) was stronger than from blends prepared by preferential crushing without air ellutriation. The design and construction of a large scale experimental plant for preferential crushing with air ellutriation in a closed cycle is recommended.

Card 2/2 There are 1 figure, 2 tables and 5 Soviet references.

GRYAZNOV, N.S.; LAZOVSKIY, I.M.; FEL'DBRIN, M.G.

Increasing the use of gas coal in coking oven charges in eastern
plants. Ugol' 34 no.4:60-62 Ap '59.   (MIRA 12:7)

1. Vostochnyy uglekhimicheskiy institut.
        (Ural Mountain region--Coke ovens)

FELD'DBRIN, M. G. Cand Tech Sci — (diss) "Dumping, Storage and Arrangement of

Coking Coal (Theory and Practice,")," Sverdlovsk, 1960, 16 pp, 150 copies

(Ural Polytechnical Institute im S. M. Kirov) (KL, 48/60, 114)

FEL'DBRIN, M.G.

Instrument for the measurement, automatic signaling and regulation
of the temperature of the upper portion of the cupola of coke ovens.
Koks i khim. no.8:61 '60.   (MIRA 13:8)
            (Poland--Coke ovens)

GRYAZNOV, N.S.; LAZOVSKIY, I.M.; FEL'DBRIN, M.G.; KORENSKIY, V.I.

Preparing coal for coking by the method of pneumatic and mechanical
separation. Koks i khim. no.8:4-6 '61.   (MIRA 15:1)

1. Vostochnyy uglekhimicheskiy institut.
                              (Coal) (Coke)

GRYAZNOV, N.S.; IAZOVSKIY, I.M.; FEL'DBRIN, M.G.; KAUFMAN, A.A.;
KOMAROVSKAYA, G.M.; LATSKAYA, M.P.; IVANOVA, L.V.

Peculiarities of the process of coking coal with oil additions.
Koks i khim. no.16:17-22 '61.   (MIRA 15:2)

1. Vostochnyy uglekhimicheskiy institut.
                        (Coke industry)

TSIPEROVICH, Moisey Veniaminovich, otv. red.; GRYAZNOV, N.S.,
red.; KOLESOV, A.P., red.; PANCHENKO, S.I., red.;
FEL'DBRIN, M.G., red.; CHAPAYKINA, F.K., red.izd-va;
KOROL', V.P., tekhn. red.

[Coal preparation and coking] Podgotovka i koksovanie uglei;
sbornik statei. Sverdlovsk, Metallurgizdat. No.3. 1962.
415 p.   (MIRA 16:12)
1. Sverdlovsk. Vostochnyy nauchno-issledovatel'skiy ugle-
khimicheskiy institut.
                    (Coal preparation) (Coke)

GRYAZNOV, N.S.; LAZOVSKIY, I.M.; FEL'DERIN, M.G.; IVANOVA, L.V.;
        KOMAROVSKAYA, G.M.

Standardization of methods of coal preparation for coking.
Koks 1 khim. no.4:3-9 '62.   (MIRA 16:8)

1. Vostochnyy uglekhimicheskiy institut.
            (Coal preparation)

FEL'DERIN, M.

"Turpinson" centrifugal separator. Koks i khim. no.4:59-60
'62.   (MIRA 16:8)
        (Coal preparation plants--Equipment and supplies)

FELD'BRIN, M.

Manufacture of coking by-products in the German Federal Republic during
1960. Koks i khim. no.10:62 '62.   (MIRA 16:9)
        (Germany,West—Coke industry—By-products)

GRYAZNOV, N.S.; LAZOVSKIY, I.M.; FEL'DBRIN, M.G.

Coal preparation for coking by means of preliminary heating
and efficient crushing. Koks i khim. no.11:10-12 '62.

(MIRA 15:12)

1. Vostochnyy uglekhimicheskiy institut.
(Coal preparation)

FEL'DBRIN, M.

Control and measuring instruments in the coke and coal chemicals
industry. Koks i khim. no.6:61-63 '63.   (MIRA 16:9)
                (Poland—Coke industry—Equipment and supplies)

FEL'DBRIN, M.G.; LAZOVSKIY, I.M.

Quality of coke in foreign countries. Koks i khim. no.7:58-59
'63.   (MIRA 16:8)

1. Vostochnyy uglekhimicheskiy institut.
                     (Coke)

FEL'DBRIN, M.

Coke ovens in foreign countries. Koks i khim. no.9:60-61 '63.
(MIRA 16:9)
(Coke ovens)

TSIPEROVICH, M.V., doktor tekhn.nauk; LAZOVSKIY, I.M., kand.tekhn.nauk;
    FEL'DERIN, M.G., kand.tekhn.nauk

    Review of A.A.Agroskin and A.K.Shelkov's book "Expansion of the
    resources of coking coals." Koks i khim. no.9:63-64 '63.
                                                      (MIRA 16:9)
            (Coke) (Agroskin, A.A.) (Shelkov, A.K.)

MIROSINICHENKO, A.M., kand. tekhn. nauk; PANCHENKO, S.I., doktor
tekhn. nauk; SHTROMBERG, B.I., kand. tekhn. nauk; FRISHBERG,
V.D., kand. tekhn. nauk; BAYDALINOV, P.A., inzh.; GRYAZNOV,
N.S., doktor tekhn. nauk; ZASHKVARA, V.G., doktor tekhn. nauk;
LAZOVSKIY, I.M., kand. tekhn. nauk; MARINICHEV, B.T., inzh.;
FEL'DBRIN, M.G., kand. tekhn. nauk; BAKUN, N.A., inzh.; BARATS,
B.M., inzh.; VOZNYY, G.F., kand. tekhn. nauk; MIKHAL'CHUK, A.M.,
inzh.; TOPORKOV, V.Ya., kand. tekhn. nauk; FLORINSKIY, N.V.,
inzh.; KHAYET, A.N., inzh.; SHELKOV, A.K., inzh., red.; ARONOV,
S.G., doktor tekhn.nauk, red.; PREOBRAZHENSKIY, P.I., inzh., red.

[Manual for coke chemists in six volumes] Spravochnik koksokhi-
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[Source of raw materials and preparation of coal for coking]
Syr'evaia baza i podgotovka uglei k koksovaniiu. 1964. 490 p.
(MIRA 17:5)

FEL'DBRIN, M.

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noncoking coals. Koks i khim. no.3:58-59 '64.   (MIRA 17:4)

GNUSIN, N.P.; PODDUBNYY, N.P.; FEL'DE, U.G.

Valve effect for a metal immersed in a solution of its ions
in the presence of a chemical and concentration polarization.
Izv. SO AN SSSR no.3 Ser. khim. nauk no.1:117-120 '65.

(MIRA 18:3)

1. Institut fiziko-khimicheskikh osnov pererabotki mineral'nogo
syr'ya Sibirskogo otdeleniya AN SSSR, Novosibirsk.

FEL'DER, Ye.G.

Using the right method for curing raw leather is the most important
factor for its preservation. Kozh robuv.prom. 2 no.3:6-7 Mr '60.
(MIRA 14:5)

(Leather)

KOMLOSH, Z.,; FEL'DESH, I.

Method of quantitative investigation of motor digestive conditioned
reflexes in small animals. Acta physiol. hung. 8 no.2:135-145 1955.

1.Otdel patofiziologii gosudarstvennogo instituta tuberkuleza, g.
Budapesht. (Postupilo 29 oktiabriia 1954 g.).
        (REFLEX, CONDITIONED,
            method of investigation of motor digestive reflexes in
            small animals)

FEL'DESH, F.

FEL'DESH, P. -- "The Effect of Physical-Chemical Properties of Mixtures
    Being Separated on the Process of Mass Transmission in Plate-Type
    Rectification Columns." Min Higher Education USSR. Leningrad Or-
    der of Labor Red Banner Technological Inst imeni Leningrad Soviet.
    Chair of Processes and Apparatus. Leningrad, 1955. (Dissertation
    for the Degree of Candidate in Technical Sciences).

So.: Knizhnaya Letopis', No. 2, 1956.

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SOV/80-32-10-14/51

5.1160

AUTHORS: Noskov, A. A., Burova, G. V., Fel'desh, P.

TITLE: Efficiency of a Single Sieve Plate of a Rectifying
              Tower

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Vol 32, Nr 10, pp
              2211-2218 (USSR)

ABSTRACT: This is an attempt to generalize, by means of
              similitude, the data from experimental determina-
              tion of the efficiency η of a single sieve plate.
              The tests were made in a foam regime; the amount of
              leakage through the plate's holes was insignificant.
              Mixtures of ethyl alcohol, methyl alcohol, and acetone
              with water, as well as mixtures of carbon tetrachloride
              with toluene, were distilled under atmospheric pressure
              at various vapor velocities of the column (from 0.3
              to 1.25 m/sec). The following physical and chemical
              constants were determined; viscosity of liquid

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Efficiency of a Single Sieve Plate of a
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$(\mu_{\text{ж}} \cdot 10^5)$ in kg $\cdot$ sec/m^2; specific gravity of
liquid $(\gamma_{\text{ж}})$ in kg/m^3; diffusion constant $(D_{\text{ж}} \cdot 10^9)$;
in m^2 sec; Prandtl diffusion number of liquid $(Pr_{\text{ж}})$;
surface tension $(\sigma \cdot 10^4)$ in kg/m; viscosity of vapor

$(\mu_{\text{п}} (\gamma_{\text{п}}) \cdot 10^6)$ in kg $\cdot$ sec/m^2; specific gravity of
vapor $(\gamma_{\text{п}})$ in kg/m^3; diffusion constant $(D_{\text{п}} \cdot 10^4)$.
in m^2/sec; Prandtl diffusion number for vapor $(Pr_{\text{п}})$.
(Abstracter's note: Russian letter ж stands for
"liquid", and Russian letter п for vapor.) The
following were taken as starting point of the study:
Equations of motion and continuity:

$$g \cdot \rho_{\text{м}} - \text{grad } p_{\text{м}} + \mu_{\text{м}} \cdot \nabla^2 w_{\text{м}} = \rho_{\text{м}} \cdot \frac{D w_{\text{м}}}{d\tau} , \qquad (4)$$

$$\text{div } w_{\text{м}} = 0, \qquad (5)$$

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...f a Single Sieve Plate of a ... Tower

$$g \cdot \rho_{n} - \mathrm{grad}\, p_{n} + \mu_{n} \cdot \nabla^2 w_{n} = \rho_{n} \cdot \frac{D w_{n}}{d \tau}, \qquad (6)$$

$$\mathrm{div}\, w_{n} = 0. \qquad (7)$$

Also, equations of convective diffusion in liquid and vapor phase:

$$\frac{Dx}{d\tau} = D_{\varkappa} \cdot \nabla^2 x, \qquad (8)$$

$$\frac{Dy}{d\tau} = D_{n} \cdot \nabla^2 y, \qquad (9)$$

where x is the concentration of the low-boiling component of the liquid; y is the same in the vapor; and $D_{\varkappa}$ and D_{n} are the corresponding constants of molecular diffusion. Equation of mass-transfer:

$$G_{0} \cdot dy = k \cdot F \cdot (y^{*} - y) \cdot d\tau. \qquad (10)$$

The boundary conditions were expressed by the equa-

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tions:

$$w_{m,rp} = w_{n,rp} \tag{11}$$

$$\mu_m \operatorname{grad} w_m = \mu_n \operatorname{grad} w_n \tag{12}$$

$$p_n = p_m + \sigma\left(\frac{1}{R_1} + \frac{1}{R_2}\right). \tag{13}$$

where $w_{m,\Gamma p}$ and $w_{n,\Gamma p}$ are, respectively, the bound-
ary velocities of liquid and vapor. Similitude criteria
can be derived from Eq. 4-13 in the usual manner. Dis-
regarding the horizontal component of the liquid's
velocity on the plate, it can be assumed that the ve-
locity of the liquid in foam regime is fully determined
by the vapor velocity in the column. Instead of w_m
and w_n the criterion shall contain only the vapor ve-
locity designated hereafter as w. Eq.4 and 6 give the
criteria:

$$Re_m = \frac{w \cdot h \cdot \gamma_m}{\mu_m \cdot g}, \quad Re_n = \frac{w \cdot h \cdot \gamma_n}{\mu_n \cdot g}, \quad Fr = \frac{w^2}{g \cdot h},$$

Card 4/8   and equations 8, 9, 10, 12 and 13 give criteria:

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$$Pe_{M} = \frac{w \cdot h}{D_{M}}, \quad Pe_{\pi} = \frac{w \cdot h}{D_{\pi}}, \quad M = \frac{k \cdot F \cdot \tau}{G_{0}}, \quad S_{\mu} = \frac{\mu_{M}}{\mu_{\pi}}, \quad K_{\pi-M} = \frac{\Delta P_{\pi-M} \cdot h}{\sigma}$$

The above give the criterial relationship:

$$M = f(Pr, Re_{M}, Re_{\pi}, Pe_{M}, Pe_{\pi}, S_{\mu}, K_{\pi-M}), \quad (14)$$

which can be easily transformed into

$$M = \varphi(Fr, Ga_{M}, Pr_{M}, Pr_{\pi}, S_{\gamma}, S_{\mu}, K_{\pi-M}), \quad (15)$$

where

$$Ga_{M} = \frac{h^3 \cdot \gamma_{M}^2}{\mu_{M}^2 \cdot g}, \quad Pr_{M} = \frac{\mu_{M}}{D_{M} \cdot \rho_{M}}, \quad Pr_{\pi} = \frac{\mu_{\pi}}{D_{\pi} \cdot \rho_{\pi}}, \quad S_{\gamma} = \frac{\gamma_{M}}{\gamma_{\pi}}.$$

The geometric parameters of the sieve plates with overflow pipes are: the diameter, D; the hole diameter, d; the spacing of the holes, t; the height of the overflow over the plate's surface, h. These variables give three geometric relationships:

$$r_1 = \frac{D}{h}, \quad r_2 = \frac{d}{h}, \quad r_3 = \frac{t}{h}.$$

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which should be included together with Eq. 15. It follows from Murphree's equation and Gautreaux-O'Connells equation (Chem. Eng. Progr., 1955, Nr 5, p 233) that

$$\eta = f(K_m, M, \pi). \tag{16}$$

The efficiency η of the plate, taking into account its geometric parameters, can be expressed in the form based on Eq. 15 and 16:

$$\eta = C \cdot Fr^a \cdot Ga_m^b \cdot Pr_m^c \cdot Pr_n^d \cdot S_y^e \cdot S_p^f \cdot K_{n-m}^g \cdot K_m^h \cdot \Gamma_1^i \cdot \Gamma_2^j \cdot \Gamma_3^k. \tag{17}$$

Eq. 17, by neglecting the effect of the surface tension and other factors, can be simplified to:

$$\eta = CFr^{-0.1} \cdot Ga_m^{0.04} \cdot r^{0.1} \cdot X. \tag{18}$$

where

$$X = Pr_m^a \cdot Pr_n^b \cdot S_y^c \cdot S_p^f \cdot K_m^h. \tag{19}$$

S in Eq. 19 is the total surface of the holes, in % of the total surface of the plate. The value of X depends solely on the physical and chemical properties

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of the liquid, and on the reflux ratio. The effect of
the composition of the liquid having been determined,
it was established that η is independent of some of the
criterial variables in Eq. 19, such as diffusion con-
stant in liquid and vapor, vapor density and viscosity,
and others. After further correlation of experimental
data and simplification of the equation, η can be ex-
pressed by:

$$\eta = 0.33 \frac{h^{0.12}\gamma_{\mathcal{M}}^{0.06}D^{0.1}g^{0.06}}{w^{0.5}\mu_{\mathcal{M}}^{0.04}} ,$$

(22)

where h is the height of the overflow over the
plate's surface (in m.); D is the diameter of the
rectifying column (in m); w is the vapor velocity
referred to the full cross section of the column
(in m/sec); $\gamma_{\mathcal{M}}$ is the specific gravity of the liquid
(in kg/m^3); $\mu_{\mathcal{M}}$ is the viscosity of the liquid (in kg
· sec/m^2); g is the free fall acceleration (in m/sec^2).
It is evident that η depends to a large extent on the
velocity of the vapor, and only to a small extent on

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the specific weight and viscosity of the liquid; further, η is practically independent of the surface of the plate's free cross section, its diameter, and the distance of the holes, and also of the gas-to-liquid ratio, mG/L. There are 3 figures; 2 tables; and 14 references, 5 U.S., 1 German, 8 Soviet. The most recent U.S. references are: Murphree, E. V., Ind. Chem. Eng., 1925, Vol 17, p 747; Lewis, W. K., ibid., 1936, Vol 28, p 399; Gautreaux, M. F., O'Connell, H. E., Ch. Eng. Progr., 1955, Nr 5, p 233; Robinson, C. S., Gilliland, E. R., Elements of Fractional Distillation, N. Y.; Ju-Chin Chu, Petr. Pr., 1951, Nr 1, p 39, Nr 2, p 154.

SUBMITTED: February 27, 1959

Card 8/8

5.1160   75665
                                                     SOV/80-32-10-14/51

AUTHORS: Noskov, A. A., Burova, G. V., Fel'desh, P.

TITLE: Efficiency of a Single Sieve Plate of a Rectifying
               Tower

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Vol 32, Nr 10, pp
               2211-2218 (USSR)

ABSTRACT: This is an attempt to generalize, by means of
               similitude, the data from experimental determina-
               tion of the efficiency η of a single sieve plate.
               The tests were made in a foam regime; the amount of
               leakage through the plate's holes was insignificant.
               Mixtures of ethyl alcohol, methyl alcohol, and acetone
               with water, as well as mixtures of carbon tetrachloride
               with toluene, were distilled under atmospheric pressure
               at various vapor velocities of the column (from 0.3
               to 1.25 m/sec). The following physical and chemical
Card 1/ 8   constants were determined; viscosity of liquid

Efficiency of a Single Sieve Plate of a   75665
Rectifying Tower   SOV/80-32-10-14/51

$(\mu_{\text{Ж}} \cdot 10^5)$ in kg $\cdot$ sec/m^2; specific gravity of

liquid $(\gamma_{\text{Ж}})$ in kg/m^3; diffusion constant $(D_{\text{Ж}} \cdot 10^9)$

in m^2 sec; Prandtl diffusion number of liquid $(Pr_{\text{Ж}})$;

surface tension $(\sigma \cdot 10^4)$ in kg/m; viscosity of vapor

$(\mu_{\text{П}} \cdot 10^6)$ in kg $\cdot$ sec/m^2; specific gravity of

vapor $(\gamma_{\text{П}})$ in kg/m^3; diffusion constant $(D_{\text{П}} \cdot 10^4)$

in m^2/sec; Prandtl diffusion number for vapor $(Pr_{\text{П}})$.
(Abstracter's note: Russian letter Ж stands for
"liquid", and Russian letter П for vapor.) The
following were taken as starting point of the study:
Equations of motion and continuity:

$$ g \cdot \rho_{\text{Ж}} - \text{grad}\, p_{\text{Ж}} + \mu_{\text{Ж}} \cdot \nabla^2 w_{\text{Ж}} = \rho_{\text{Ж}} \cdot \frac{D w_{\text{Ж}}}{d\tau}, \qquad (4) $$

$$ \text{div}\, w_{\text{Ж}} = 0, \qquad (5) $$

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Efficiency of a Single Sieve Plate of a
Rectifying Tower

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$$g \cdot \rho_n - \operatorname{grad} p_n + \mu_n \cdot \nabla^2 w_n = \rho_n \cdot \frac{D w_n}{d\tau},$$ (6)

$$\operatorname{div} w_n = 0.$$ (7)

Also, equations of convective diffusion in liquid and
vapor phase:

$$\frac{Dx}{d\tau} = D_{\text{M}} \cdot \nabla^2 x,$$ (8)

$$\frac{Dy}{d\tau} = D_n \cdot \nabla^2 y,$$ (9)

where x is the concentration of the low-boiling
component of the liquid; y is the same in the vapor;
D_{M} and D_n are the corresponding constants of molecular
diffusion. Equation of mass-transfer:

$$G_0 \cdot dy = k \cdot F \cdot (y^* - y) \cdot d\tau.$$ (10)

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The boundary conditions were expressed by the equa-

HUNGARY / Organic Chemistry. Organic Synthesis.   G

Abs Jour: Ref Zhur-Khimiya, No 12, 1958, 39541.

Author   : Gal Feldeshi, Krasnai.
Inst   : Not given.
Title   : The Role of Halogen Alcoholates of Aluminum in Re-
           duction According to Meervein-Ponndorf-Verlei. V.
           The Reduction of alpha-hydroxyiminoketones.

Orig Pub: Magyar kem. folyoizat, 1957, 63, No 1, 5-11.

Abstract: The reduction of α-hydroxyiminoketones (OK) in the
          presence of $Al(OCH(CH_3)_2)_3$ (I) was studied. The
          OK's which are not separated into stereoisomers
          were reduced to α-hydroxyaldoximes or α-hydroxy-
          ketomines with a good yield, also the HK with an

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Abstract: anticonfiguration. OK's with sin-configuration
         are reduced with poor yields (40-50%) since simul-
         taneously with CO-group reduction (I) is decomposed
         with formation of inner complex Al-derivative (ICD).
         It is shown that CO-group, which takes part in
         the complex formation is not reduced. The yield
         is improved on account of a relatively delayed for-
         mation of ICD. If the reduction is carried out in
         the presence of a mixture of (I) and $ClAl(OCH(CH_3)$
         $)_2)_2$ (II) or $BrAl(OCH(CH_3)_2)_2$ (III), the formation
         of ICD is depressed and reduction of OK with sin-
         configuration is possible. The obtained α-hydroxy
         hydroxyimino compounds form with 3 moles of C_6H_5
         $NHNH_2$ the corresponding phenylosazones (PO).

         Into the solution of 1 mole of (I) in 1200 ml of

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G

HUNGARY / Organic Chemistry. Organic Synthesis

Abs Jour: Ref Zhur-Khimiya, No 12, 1958, 39541

Abstract: added and one obtains $(C_6H_5CO)_2C=NOH$ (V), yield 95%, M.P. 146°C. (from chloroform / pet. ether).
To the boiling mixture of a solution of 1 mole of (I) in 1 liter of benzene and 300 ml of solution A is added dropwise within 4 hours a solution with 0.66 mole of $CH_3COC(=NOH)CH_3$ in 600 ml of benzene, the contents are concentrated by evaporation, after 24 hours ($\sim$20°C) are boiled four times, each time for 30 minutes with a 5-fold amount of 96% alcohol, yield of acetoinoxime (VI) is 58%, B.P. 102°C/6mm.
To the boiling mixture of 124 g of (I) in 800 ml of abs. benzene and 200 ml of solution A is added, within 2 hours, a solution of 0.25 mole of $(CH_3CO)_2C=NOH$ (VII) in 150 ml of benzene, after 4 hours it is treated as above and one obtains $(CH_3CHOH)_2C=NOH$, yield 80%, M.P. 129°C (from ethyl

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HUNGARY / Organic Chemistry. Organic Synthesis   G

Abs Jour: Ref Zhur-Khimiya, No 12, 1958, 39541.

Abstract: abs. benzene or toluene, is introduced 1 mole of
the gaseous HCl at 10°C., an azeotrope of the sol-
vent and $(CH_3)_2CHOH$ (IV) is formed, and is distil-
led off, and is then made-up to 1000 ml at ~20°C;
and the resulting solution contains 1 mole of (II)
(Soln. A). Similarly a solution is obtained which
contains (III). In CCl_4 or (IV) media, (II) or
(III) are prepared similarly, yield 60-80%.

To the solution with 0.3 moles of $(C_6H_5CO)_2CH_2$ in
350 ml of acetic acid within 30 minutes is added
a solution with 0.31 moles of $NaNO_2$ in 35 ml of
water at <15°C, after 2 hours 700 ml of water is

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Abs Jour: Ref Zhur-Khimiya, No 12, 1958, 39541.

Abstract: acetate). In the same way by reduction of (V)
was obtained $(C_6H_5CHOH)_2C=NOH$, yield 67%, M.P.
151°C (from ethyl acetate / petroleum ether);
from $CH_3COC(=NOH)$. $COOC_2H_5$ within 5.5 hours one
obtains $CH_3CHOHC(=NOH)COOC_2H_5$ (VIII), yield 67.5%,
b.p. 122°C./1mm. The relative measurements of the
reduction rate of (VII) and its Co-complex (M.P.
160°C from water) was carried out. A mixture of
0.4 mole of (I), 500 ml of (IV), 100 ml of solu-
tion A and 0.2 mole of $C_6H_5COCH=NOH$ is heated for
5 hours (50°C.), treated as above, yield of
$C_6H_5CHOHCH=NOH$ (IX) is 84%, M.P. 89°C (from ethyl

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HUNGARY / Organic Chemistry. Organic Synthesis.   G

Khimiya, No 12, 1958, 39541.

SOURCE CODE: HU/2502/65/043/002/0231/0236

45347-66   EWP(1)   RM

ACC NR: AT6033614

AUTHOR: Foldesi, Istvan--Fel'deshi, I. (Doctor; Budapest); Gomory, Pal--Gemeri, P. (Budapest)

ORG: [Foldesi] Institute of General and Inorganic Chemistry, Eotvos Lorand University, Budapest (Eotvos Lorand Tudomanyegyetem, Altalanos es Szervetlen Kemiai Intezet); [Gomory] Research Group for Inorganic Chemistry, MTA, Budapest (MTA, Szervetlen Kemiai Kutatocsoport)

TITLE: Alkylation with organopotassium compounds

SOURCE: Academia scientiarum hungaricae. Acta chimica, v. 43, no. 2, 1965, 231-236

TOPIC TAGS: alkylation, organomercury compound

ABSTRACT: Isopropylpotassium was prepared from diisopropylmercury with a K-Na alloy. The alkylating properties of the compound were examined with carbon dioxide and with compounds containing -Si-Cl and -Sn-Cl bonds. In petroleum ether the isopropyl group, in benzene the phenyl group was introduced successfully. An S_N1 mechanism was followed by the alkylation reaction. Orig. art. has: 1 figures. [Orig. art. in Eng.]
[JPRS: 33,540]

SUB CODE: 07 / SUBM DATE: 29Jun64 / OTH REF: 019

Card 1/1 LC

L-04191-67   EWT(m)/EWP(w)/T/EWP(t)/ETI   IJP(c)   JD/JG

ACC NR: AT6026543   SOURCE CODE: UR/2776/66/000/046/0005/0012

AUTHOR: Babakov, A. A.; Fel'dgandler, E. G.; Kareva, Ye. N.; Savkina, L. Ya.

ORG: Central Scientific Research Institute of Ferrous Metallurgy, Moscow (Tsentral'-
nyy nauchno-issledovatel'skiy institut chernoy metallurgii)

TITLE: Mechanical and corrosion properties of the new two-phase OKh21N6B stainless
steel

SOURCE: Moscow. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii.
Sbornik trudov, no. 46, 1966. Spetsial'nyye stali i splavy (Special steels and al-
loys), 5-12

TOPIC TAGS: stainless steel, titanium, columbium, magnetization, mechanical property,
corrosion resistance, metallographic examination / OKh21N5 steel, OKh21N6B steel

ABSTRACT: A study was done on the effects of columbium additions on the ferritic-
-austenitic structure of OKh21N5 steels, to which titanium is normally added. Two
laboratory heats of OKh21N6B steel were made with Nb contents of 0.44 and 0.73%. Me-
chanical and magnetic properties were given as functions of quenching temperature
which ranged from 1000 to 1300°C. For both alloys the fracture strength decreased
monotonically with temperature while 0.2% yield strength, elongation and impact
strength changed slightly. Magnetization saturation increased with rise in quench tem-
perature due to an increase in the amount of ferrite phase, as confirmed by metallo-

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L 04191-67

ACC NR: AT6026543

graphy. Changes in these mechanical properties and magnetic saturation were given as
functions of tempering temperature after quenching from 1000°C. After tempering in
the interval 450-700°C for 1, 10 and 100 hrs little change in fracture strength re-
sulted although other properties were affected; the 0.2% yield strength increased with
tempering temperature, while elongation and impact strength decreased. The magnetic
saturation increased from 4000 to 11000 gauss during tempering to 700°C. All these
properties were not greatly affected by the Nb content. Microstructures showed that
after quenching the steel had a ferritic-austenitic structure with dispersed carbides.
Independent of time, tempering to 600°C did not change this structure, however, in
the range 650-700°C (10 to 100 hrs) austenite nodules formed within ferrite grains and
martensite platelets formed in the austenite. The number of twists to fracture, given
as a function of testing temperature, increased from 4 to 1000°C to 20 at 1250°C.
OKh21N6B and OKh21N5T steels behaved similarly in corrosion tests conducted in boiling
30, 50 and 65% HNO₃. However, welded samples of OKh21N6B were 3 times as stable in
65% HNO₃. Welded and unwelded samples of OKh21N6B did not exhibit intercrystalline
corrosion tendencies after quenching from 1000 and 1200°C. Orig. art. has: 5 figures,
2 tables.

SUB CODE: 11/   SUBM DATE: none/   ORIG REF: 001

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L 04190-67   EWT(m)/EWP(w)/T/EWP(t)/ETI   IJP(c)   JD
ACC NR: AT6026544
SOURCE CODE: UR/2776/66/000/046/0013/0019

AUTHOR: Fel'dgandler, E. G.; Kareva, Ye. N.; Savkina, L. Ya.

ORG: Central Scientific Research Institute of Ferrous Metallurgy, Moscow (Tsentral'-nyy nauchno-issledovatel'skiy institut chernoy metallurgii)

TITLE: Some characteristic changes in the structure and properties of the two-phase steels Kh21N5T and OKh21N6M2T after tempering

SOURCE: Moscow. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii. Sbornik trudov, no. 46, 1966. Spetsial'nyye stali i splavy (Special steels and alloys), 13-19

TOPIC TAGS: stainless steel, ferrite, austenite, temperature dependence, impact strength, saturation magnetization, microhardness, metallographic examination, phase analysis / Kh21N5T steel, OKh21N6M2T steel

ABSTRACT: The solid solution stability of the two-phase Cr-Ni stainless steels Kh21N5T and OKh21N6M2T during tempering was studied. Three heats of Kh21N5T and two of OKh21N6M2T with Cr_equivalent/Ni_equivalent ranging from 2.86 to 3.61 were prepared. Changes in impact strength and saturation magnetization were given for water quenched samples after 30 min at either 1000 or 1250°C and after subsequent tempering in the 450-700°C range for 1, 10, 50 and 100 hrs. The greater the amount of carbon uncom-

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L 04190-67
ACC NR: AT6026544

3

bined with Ti the larger were the brittle regions shown on tempering temperature-time diagrams. Except for the lower C level of 0.04% C, both high and low temperature brittle regions were observed in samples quenched from 1000°C. For samples quenched from 1250°C and tempered in the range 450-550°C only a single low temperature brittle region occurred. Microhardnesses of the ferritic and austenitic phases in tempered samples were given as a function of tempering time. Only ferrite increased in hardness under these conditions due to a decomposition of the ferritic solid solution; the kinetics were similar to a decomposition process and the curves exhibited maxima, which indicated a coagulation of the hardening phase. The saturation magnetization given for these conditions showed two temperature regions of instability corresponding to the brittle regions mapped out by impact tests. The drop in saturation magnetization at the lower temperature range was caused by the formation of a nonmagnetic phase in ferrite, while the instability at higher temperatures was caused by the transformation of austenite into martensite. At higher tempering temperatures, the ferrite boundaries thickened and austenitic nodules formed within the ferrite. The brittleness at low tempering temperatures was not a function of alloying and was characteristic of all grades of Kh21N5T and OKh21N6M2T steel. However, above 600°C, brittleness was a function of alloying; in Kh21N5T steels it was caused by carbide formation. In OKh21N6M2T it resulted from σ-phase formation. Orig. art. has: 4 figures, 1 table.

SUB CODE: 11/   SUBM DATE: none

Card 2/2

L C4 3S-67   EWT(m)/EWP(w)/T/EWP(t)/ETI   IJP(c) JD
ACC NR: AT6026545   (A)   SOURCE CODE: UR/2776/66/000/046/0020/0029

AUTHOR: Sinel'nikov, M. I.; Babakov, A. A.; Barziy, V. K.; Demchishin, A. V.;
Laskaronskiy, E. N.; Lyublin, Ye. B.; Fel'dgandler, E. G.; Cherkashina, N. P.; Cher
yavskaya, S. G.

ORG: Central Scientific Research Institute of Ferrous Metallurgy, Moscow (Tsentral'-
nyy nauchno-issledovatel'skiy institut chernoy metallurgii)

TITLE: A study of the plasticity of 1Kh21N5T (EI811) steel at high temperatures

SOURCE: Moscow. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii.
Sbornik trudov, no. 46, 1966. Spetsial'nyye stali i splavy (Special steels and
alloys), 20-29

TOPIC TAGS: stainless steel, heat treatment, hot ductility, metallographic examina-
tion, austenite, ferrite, temperature dependence / 1Kh21N5T steel, EI811 steel

ABSTRACT: Ten heats of EI811 steel containing 4.8-5.3% Ni and 0.25-0.53% Ti were pre-
pared in order to study the effect of temperature and ingot cementation time on phase
composition. The dependence between phase ratios and metal plasticity at high tem-
peratures was also studied. Samples were water quenched after heating at 1000, 1100,
1200, 1250 and 1300°C for 1, 2, 5 and 10 hr. Hot torsion tests were conducted at a
twist rate of 60 rpm at 900, 1000, 1100, 1200, 1250 and 1300°C after a 20 min soak.

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L 04189-67

ACC NR: AT6026545   3

The number of hot twists to fracture increased as a function of temperature. After
fracturing, the samples were water-quenched to retain the high temperature structure
and then examined metallographically. The amount of austenite as a function of heat
treatment for each steel is given. Micrographs of each treatment are shown for repre-
sentative steel samples. The quantity of ferrite increased with rise in temperature
or increase in time at temperature, with the most intense $\alpha \rightarrow \gamma$ conversion occurring
in the 1200-1300°C range; by holding for 10 hrs in this range almost all of the struc-
ture became ferritic. The plasticity at different temperatures depended on the ratio
of α- and γ-phases in the structure at the given temperature. Maximum plasticity
resulted for γ-phase contents less than 25-30%. It was recommended that the ingots of
EI811 steel be soaked at higher temperatures throughout rolling than is normally typi-
cal, i. e., at 1290 to 1310°C instead of 1250 to 1270°C. Orig. art. has: 1 table,
6 figures.

SUB CODE: 11/   SUBM DATE: none

Card 2/2

Feldsander, G. G. Mortar for laying fire brick.
Influence of additions. *Ogneupory*, 3 [7] 524-30,
[8] 574-81 (1935). —By adding soluble glass, the refrac-
toriness, density, and linear shrinkage decrease, and the
permeability to air (not in the case of mortars with sand)
and the resistance to rupture increase. Portland cement
can be added where high strength combined with moderate
air permeability is required. Additions of diatomaceous
earth decrease the density and strength of the mortar and
lower its refractoriness and load capacity.

333. SEMI-DRY PROCESS IN THE ORDJONIKIDZE WORKS.—O. O. Feldhandler. (Ogneupory, 6, 464, 1940). Automatic devices are described which ensure (a) constant minimum level of material in the storage bins, (b) control of the duration of mixing, and (c) an even flow of material to the process with preliminary reduction of lumps.

Voevodin, B. N., and Fel'dgandler, G. G. TECHNICAL CHANGES IN THE REFRACTORY INDUSTRY DURING WAR YEARS. *Ogneupory*, 10 [1] 5-14 (1945).—Improvements in the quality of refractories, particularly silica and magnesite, used in metallurgical plants in the Urals are discussed in detail.

CA.

19

Deformation of grog ware under load at constant temperatures. D. N. Poluboyarinov and G. G. Fel'dgandler. *Ogneupory* 13, 107-18(1948).—To investigate and compare the generally used testing methods, a lab. device was constructed which permitted testing one brick instead of two at a time. Three methods were checked: (1) the isothermic method (at 1350°) on whole bricks; (2) the same method on cylinders 35 mm. diam. and 50 mm. high; (3) the standard (OST 3267) method on similar cylinders with continuous increase of temp. at a rate of 4–5° per min. until the sample had compressed 40%. The compression depends on the apparent viscosity at the testing temp., i.e. on the chem.-mineralogical compn. The exptl. values obtained are connected only relatively with the beginning-of-softening temp. and not at all with that of 40% compression. Several brands of brick showed a considerable discrepancy in values obtained for whole brick and for cylinders. In general, the three methods gave comparable results.   E. K. Stefanowsky

1. FEL'DGANDLER, G. G.

2. USSR (600)

4. Aristov, G. G.

7. "Molder and presser of refractory products."
   G. G. Aristov. Reviewed by G. G. Fel'dgandler.
   Ogneupory.17. No. 9. 1952.

9. Monthly List of Russian Accessions, Library of Congress, January 1953, Unclassified.

ZAGZHDA,, V.P.; TIKHONOVA,L.A.; SOKOLOV, V.I.; MARANTS, A.G.; RYBNIKOV, V.A.;
KAZAKEVICH, S.S.; SARMIN, A.P.; GAVRILOV, A.I.; NOVIKOV, A.N.;
NECHEPORENKO, M.A.; KAL'MOVA, Ye.A.; FEDOROV, G.A., redaktor;
FEL'DGANDLER, G., redaktor; ROZENTSVEYG, Ya.D., redaktor izdatel'-
stva; MIKHAYLOVA, V.V., tekhnicheskiy redaktor

[Handbook on refractory elements and materials] Spravochnik na
ognoupornye izdeliia, materialy i syr'e. Sostavlen po gosudarstven-
nym standartam i tekhnicheskim usloviiam. Moskva, Gos. nauchno-
tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1956. 195 p.
(MIRA 10:2)

1. Russia (1923-   U.S.S.R.) Ministerstvo chernoy metallurgii.
2. Leningradskiy istitut ognouporov. (for Zagzhda, Tikhonova, Sokolov,
Marants, Rybnikov, Kazakevich, Sarmin, Gavrilov, Novikov, Necheporenko,
Kal'mova.
    (Refractory materials)

FEL'DGANDLER, G.G.

131-12-8/9

AUTHOR: Fel'dgandler, G.G.

TITLE: Short Reports (Kratkiye soobshcheniya). Conference of the Scientific-Technical Council of the Institute for Refractories in Khar'kov (Sessiya nauchno-tekhnicheskogo soveta instituta ogneuporov v Khar'kove)

PERIODICAL: Ogneupory, 1957, Nr 12, pp. 567-568 (USSR)

ABSTRACT: This conference took place on October 28/30, 1957, and was attended by many representatives of scientific institutes and the corresponding industries. Reports were heard on various problems connected with refractories, of which the following met with the greatest interest:
1.) Professor Karyakin, L.I., head of the petrographical laboratory of the Khar'kov Institute for Refractories, spoke about the results obtained by research work connected with kaolins and clays of the Ukraine. 2.) I.G. Orlova, Candidate of Technical Sciences, gave a report on the research work carried out concerning sintering and swelling up of refractory clays and kaolins when heated. 3.) T.S.Ignatova, scientific collaborator of long standing of the Ural department of the Leningrad Institute for Refractories, delivered a report on the results obtained by laboratory work as well as by the industrial testing of the rational utilization of primary kaolin found in the Kyshtym deposits and of the semiacid clays discovered in the Ural deposits.

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131-12-8/9

Short Reports. Conference of the Scientific-Technical Council of the Institute for Refractories in Khar'kov

4.) A.P. Sarmin, head of the Geological Laboratory for Raw Materials of the Leningrad Institute for Refractories, spoke about the geological and technological characteristic of the kaolin-hydrargillite raw material found in the Arkalyk deposits in the Kazakh SSR. 5.) Professor G.V. Kukolev and his collaborator (Khar'kov Institute for Refractories), investigated the influence exercised by additions upon the sintering of kaolins. 6.) O.M. Margulis, the scientific collaborator of the Khar'kov Institute for Refractories, gave a report on the technology of the production of the testing of unburnt kaolin products in practice, the durability of which in furnaces is often greater than that of burnt ones. Finally, quite an amount of work was mentioned which ought to be carried out.

ASSOCIATION: Ferrous-metallurgical Department of the State Planning Committee of the RSFSR (Otdel chernoy metallurgii Gosplana RSFSR)

AVAILABLE: Library of Congress

Card 2/2

FEL'DGANDLER, G.G.

"Refractories in the nonferrous metallurgy" by M.B. Lur'e. Reviewed by G.G. Fel'dgandler. Ogneupory 22 no.5:239 '57.   (MLRA 10:6)
(Nonferrous metals—Metallurgy)   (Refractory materials)
(Fel'dgandler, G.G.)

MARANTS, A.G.; ZEGZHD, V.P.; TIKHONOVA, L.A.; SOKOLOV, V.I.; RYBNIKOV, V.A.
[deceased]; DEREVYANCHENKO, L.D.; KARKLIT, A.K.; AKSEL'RAD, E.A.;
SARMIN,A.P.; FEL'DGANDLER, G.G., red.; MAKSIMOV, Ye.I., red. izd-va
KARASEV, A.E., tekhn. red.

[Handbook of refractory materials, products, and raw materials;
compiled accoridng to state standards and technical specifications]
Spravochnik na ogneupornye izdeliia, materialy i syr'e. Sostavlen po
gosudarstvennym standartam i tekhnicheskim usloviiam. Izd.2., ispr.
i dop. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvet-
noi metallurgii, 1961. 338 p.   (MIRA 14:9)

1. Sotrudniki Vsesoyuznogo instituta ogneuporov (for all except
Fel'dgandler, Maksimov, Karasev).
                        (Refractory materials--Standards)

FEL'DGANDLER, G.G.

Use and prospects of introducing refractory concrete and ramming materials in ferrous metallurgy. Ogneupory 28 no. 7:295-300 '63.

(MIRA 16:9)

1. Gosudarstvennaya inspektsiya po sluzhbe i kachestvu ogneuporov.

FEL'DGENDLER, M.Ya. (Odessa)

Primary pulmonary sarcoma. Vrach.delo no.11:1209 N '56. (MLRA 10:3)

1. Khirurgicheskoye otdeleniye (saveduyushchiy - M.Ya.Fel'dgendler)
bol'nitsy savoda im. Yanvarskogo vosstaniya.
     (LUNGS--CANCER)

L 34368-66   FWP(e)/FWT(m)/T/FWP(t)/ETI   IJP(c)   JP

ACC NR: AP5027228   SOURCE CODE: UR/0020/65/164/006/1286/1287

AUTHOR: Filonenko, N. Ye.; Ivanov, V. I.; Fel'dgun, L. I.

ORG: All Union Scientific-Research Institute of Abrasives and Polishing (Vsesoyuznyy nauchno-issledovatel'skiy institut abrazivov i shlifovaniya)

TITLE: Morphology of cubic boron nitride crystals

SOURCE: AN SSSR. Doklady, v. 164, no. 6, 1965, 1286-1287

TOPIC TAGS: boron compound, cubic crystal. , crystal structure, boron nitride compound, x ray diffraction analysis, crystal symmetry, twinning

ABSTRACT: R. H. Wentorf (J. Chem. Phys., 34, 1, 1961) reported that the cubic boron nitride which he synthesized and which had the hardness of diamond was crystallized in the form of tetrahedrons and octahedrons. Later, F. P. Bundy and R. H. Wentorf (J. Chem. Phys., 38, 5, 1963) showed, on the basis of X-ray diffraction studies, that cubic boron nitride had the structure of sphalerite. This discrepancy promoted the recent study. The crystals, sufficiently large (0.3-0.6 mm) for crystallographic studies, were grown during work on the synthesis of nitride. The subsequent measuring of >100 crystals proved that cubic boron nitride has a hexatetrahedral type of symmetry (F$\bar{4}$3m). The combination of positive {111} and negative {1$\bar{1}$1} tetrahedrons is the main crystallographic form of its crystals. The most predominant were octahedral-shaped crystals with characteristic apexes in the form of a double sloping roof formed by the

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ACC NR: AP5027228

combination of two faces of hexagonal and two faces of triangular form and belonging to the positive and negative tetrahedrons, respectively. The polysynthetic and simple twins were detected in polished thin sections. They consisted of plate-like aggregates intergrown at various angles. The thickness of individuals forming polysynthetic twins varied from a fraction of $a\mu$ to several hundred μ. As a rule, the polysynthetic twins contained numerous inclusions captured during crystallization. The microhardness of cubic boron nitride varied within the range of 7300 - 10,000 kg/mm^2, with 8500-8600 kg/mm^2 being the most common. A study in reflected light under a metallographic micro-scope detected on the surface of tetrahedral faces the vicinal faces and vicinaloids, the layers and spirals of growth, the steps from several layers of growth, the in-clusions of small crystals and twins of cubic boron nitride, and the inclusions of impurities. The paper was presented by Academician N. V. Belov 17 Aug 65. The authors thank V. P. Butuzova for interest in their work and discussion of results. Orig. art. has: 4 fig.

SUB CODE: 20,07/SUBM DATE: 15Jul65/ OTH REF: 002

Card 2/2